

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A hydrogen permeable membrane comprising a non-crystalline nickel-zirconium alloy composed of:

44 to 75 atom % of nickel and

0.2 to 16 atom % of aluminum;

with the balance being zirconium and unavoidable impurities;

or comprising a non-crystalline zirconium-nickel alloy composed of:

44 to 75 atom % of zirconium; and

0.2 to 16 atom % of aluminum[,];

with wherein the balance being nickel and unavoidable impurities.

Claim 2 (currently amended): The hydrogen permeable membrane of claim 1 wherein, if the balance is nickel, the nickel content is not moreless than or equal to 43 atom %.

Claim 3 (currently amended): A hydrogen permeable membrane comprising a non-crystalline nickel-zirconium alloy composed of:

44 to 75 atom % of nickel and

0.2 to 12 atom % of vanadium and/or niobium;

with the balance being zirconium and unavoidable impurities;

or comprising a non-crystalline zirconium-nickel alloy composed of

44 to 75 atom % of zirconium; and

0.2 to 12 atom % of at least one of vanadium and/or and niobium[,];

with wherein the balance being nickel and unavoidable impurities.

Claim 4 (currently amended): The hydrogen permeable membrane of claim 3 wherein, ~~if the balance is nickel, the nickel content is not moreless than or equal to 43 atom %.~~

Claim 5 (currently amended): A hydrogen permeable membrane comprising a non-crystalline nickel-zirconium alloy composed of:

~~44 to 75 atom % of nickel,~~

~~0.2 to 12 atom % of niobium, and~~

~~0.1 to 10 atom % of phosphorus, provided the combined amount of niobium and phosphorus is not more than 18 atom %,~~

~~with the balance being zirconium and unavoidable impurities;~~

~~or comprising a non-crystalline zirconium-nickel alloy composed of~~

~~44 to 75 atom % of zirconium[,];~~

~~0.2 to 12 atom % of niobium[,]; and~~

~~0.1 to 10 atom % of phosphorus, provided wherein the combined amount of niobium and phosphorus is not moreless than or equal to 18 atom %,~~

~~with the balance being nickel and unavoidable impurities.~~

Claim 6 (currently amended): The hydrogen permeable membrane of claim 5 wherein, ~~if the balance is nickel, the nickel content is not moreless than or equal to 43 atom %.~~

Claim 7 (new): A hydrogen permeable membrane comprising a non-crystalline nickel-zirconium alloy composed of:

44 to 75 atom % of nickel; and

0.2 to 16 atom % of aluminum;

wherein the balance being zirconium and unavoidable impurities.

Claim 8 (new): A hydrogen permeable membrane comprising a non-crystalline nickel-zirconium alloy composed of:

44 to 75 atom % of nickel; and

0.2 to 12 atom % of at least one of vanadium and niobium,
wherein the balance being zirconium and unavoidable impurities.

Claim 9 (new): A hydrogen permeable membrane comprising a non-crystalline nickel-zirconium alloy composed of:

44 to 75 atom % of nickel;
0.2 to 12 atom % of niobium; and
0.1 to 10 atom % of phosphorus; wherein the combined amount of niobium and phosphorus is not more than 18 atom %,
wherein the balance being zirconium and unavoidable impurities.